

PATENT ABSTRACTS OF JAPAN

(11)Publication number : 11-090895
 (43)Date of publication of application : 06.04.1999

(51)Int.Cl. B26D 7/01
 B26F 1/32
 G06K 1/08

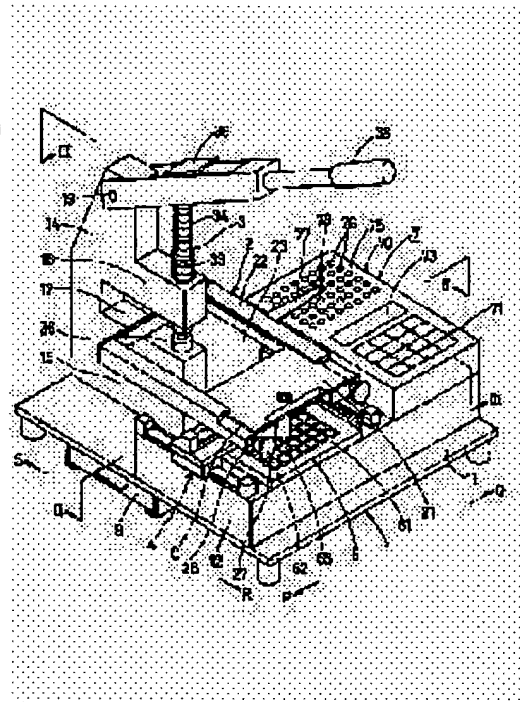
(21)Application number : 09-247935 (71)Applicant : KAMACHO SEIKO KK
 (22)Date of filing : 12.09.1997 (72)Inventor : INOUE TAKAO

(54) CARD PUNCHER

(57)Abstract:

PROBLEM TO BE SOLVED: To form a puncher so that punching work can be performed easily accurately and in a short time.

SOLUTION: A hold base 2 holding a punch card C mounted and a punch mechanism 3 punching the punch card C mounted in the hold base 2 are provided, either one of the hold base 2 or the punch mechanism 3 is movably guided in a horizontal surface, so as to facilitate position alignment of a punch position, a position corresponding to a position which must be punched in a separate position from the punch card is displayed by lighting, only by aligning a cursor 77 thereto, a punch part of the punch mechanism 3 and a position to be punched of the punch card are aligned.



LEGAL STATUS

[Date of request for examination] 12.09.1997

[Date of sending the examiner's decision of rejection] 14.11.2000

[Kind of final disposal of application other than the examiner's decision of rejection or

application converted registration]

[Date of final disposal for application]

[Patent number]

[Date of registration]

[Number of appeal against examiner's
decision of rejection]

[Date of requesting appeal against examiner's
decision of rejection]

[Date of extinction of right]

Copyright (C); 1998,2003 Japan Patent Office

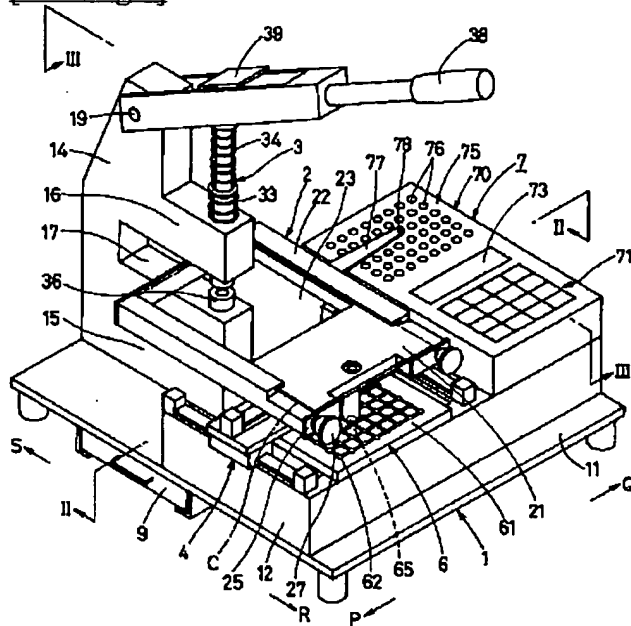
* NOTICES *

JPO and NCIPi are not responsible for any damages caused by the use of this translation.

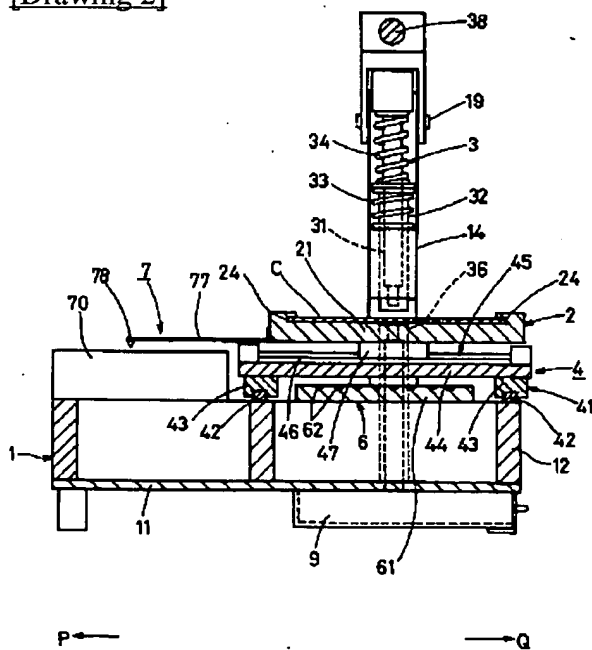
1. This document has been translated by computer. So the translation may not reflect the original precisely.
2. **** shows the word which can not be translated.
3. In the drawings, any words are not translated.

DRAWINGS

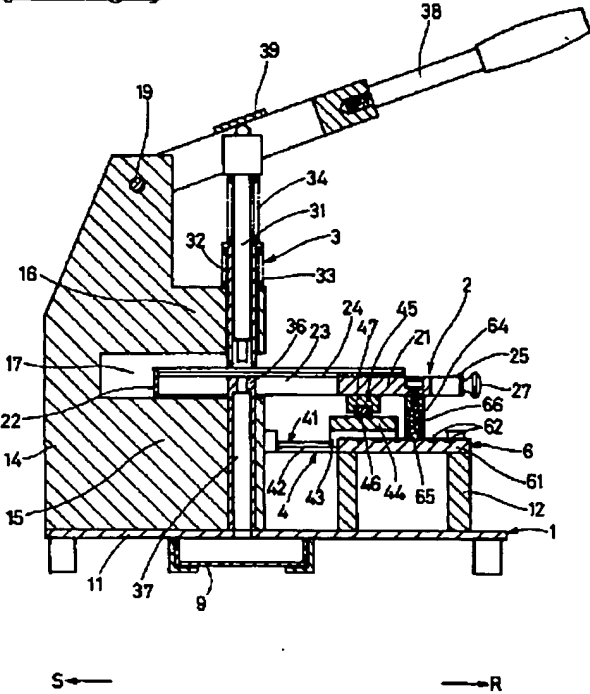
[Drawing 1]



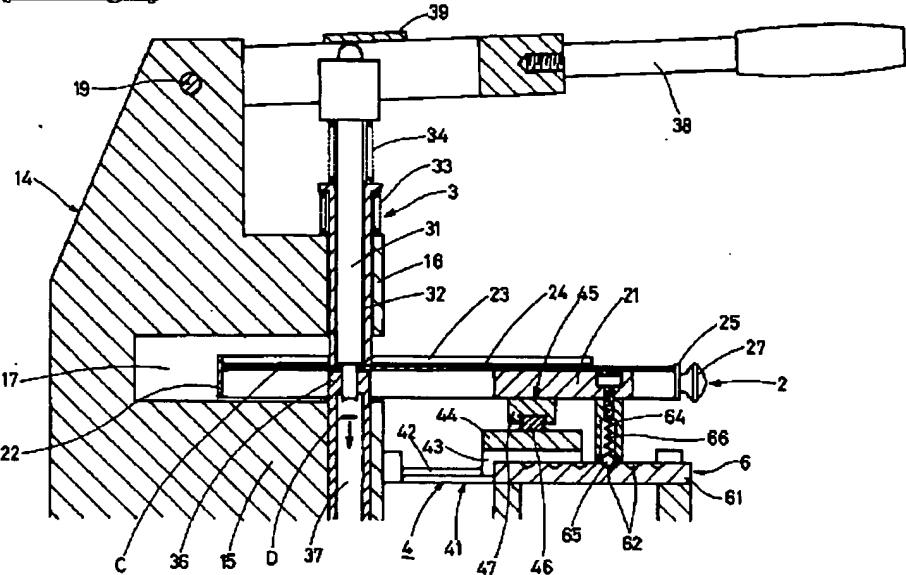
[Drawing 2]



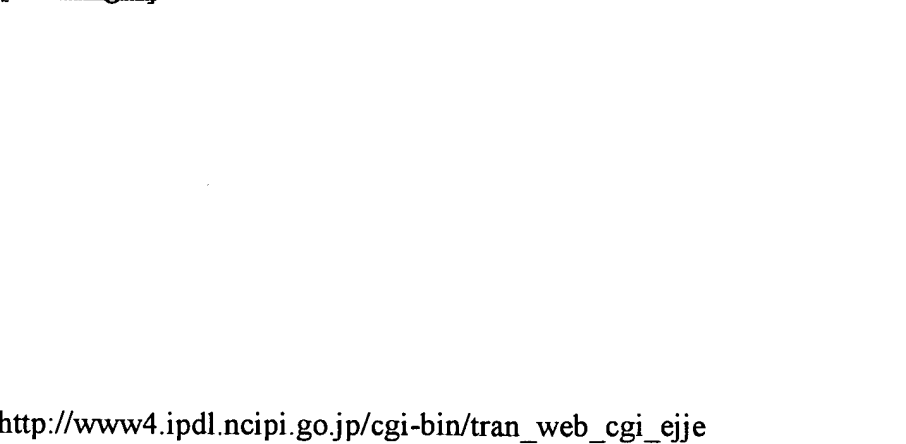
[Drawing 3]

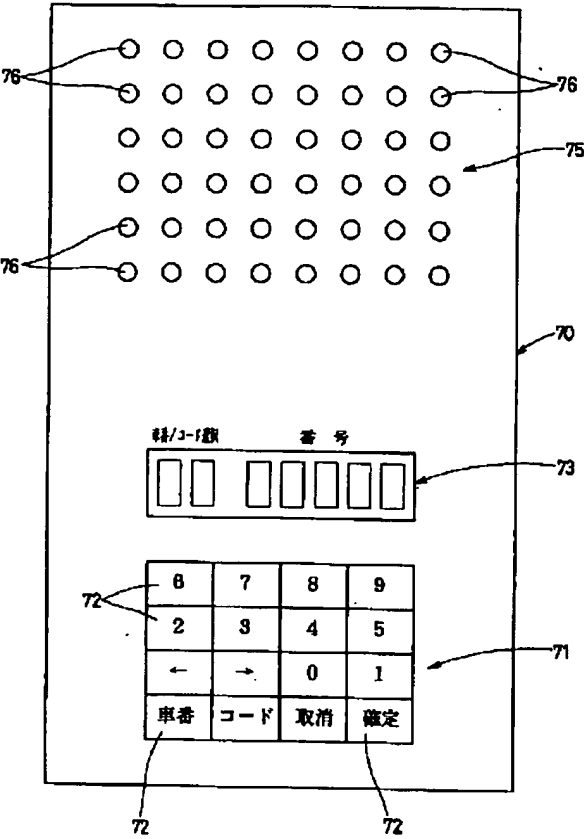


[Drawing 4]

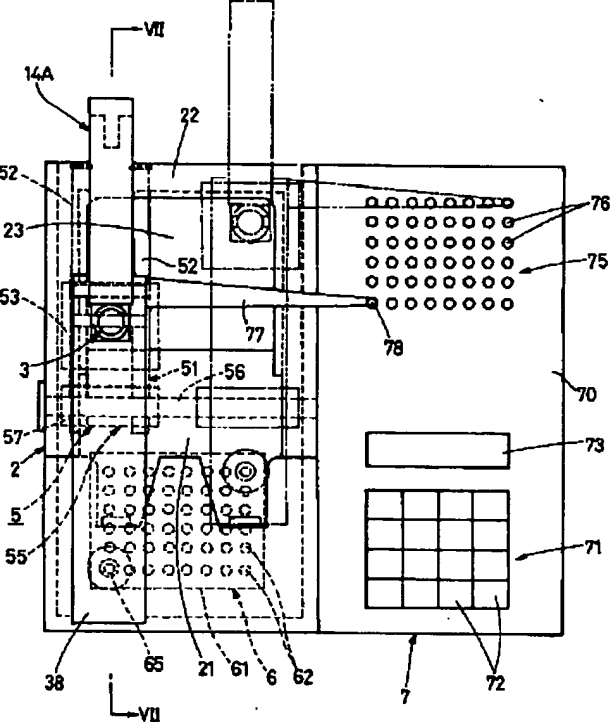


[Drawing 5]

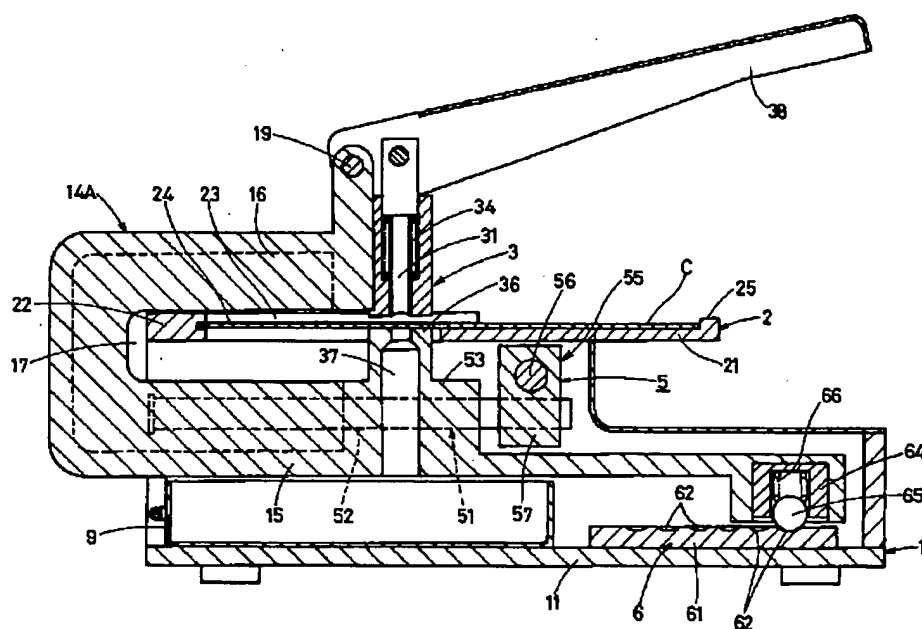




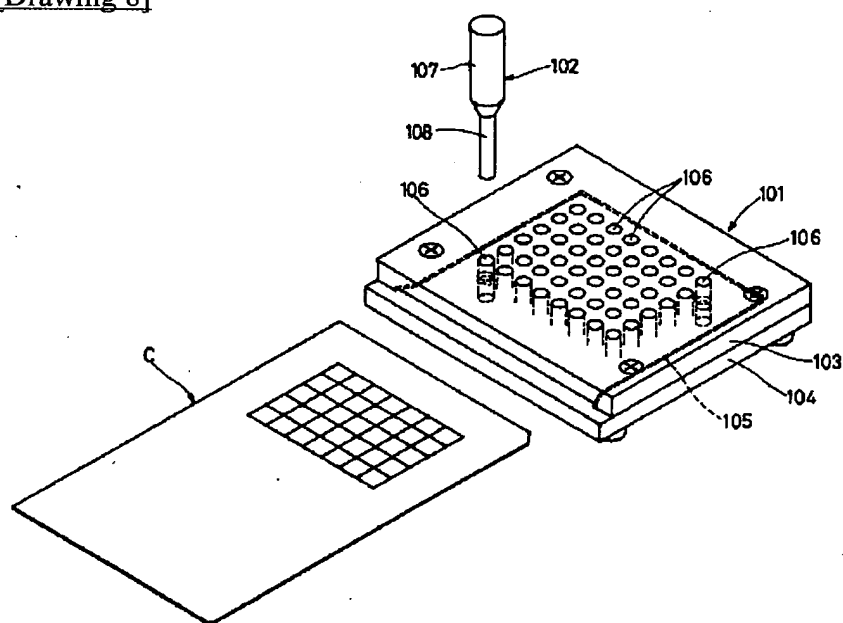
[Drawing 6]



[Drawing 7]



[Drawing 8]



[Translation done.]

* NOTICES *

JPO and NCIPi are not responsible for any damages caused by the use of this translation.

1. This document has been translated by computer. So the translation may not reflect the original precisely.
2. **** shows the word which can not be translated.
3. In the drawings, any words are not translated.

DETAILED DESCRIPTION

[Detailed Description of the Invention]

[0001]

[Field of the Invention] The invention in this application relates to the card puncher for *****(ing) to the punch card used for management of track scale etc.

[0002]

[Description of the Prior Art] For example, generally the truck measured with track scale in a waste disposal plant etc. is managed with the punch card. As data inputted into a punch card, although there are a car number, a dust kind, an area, a contractor, etc., these data are inputted into one punch card by performing two or more *****. And a punch card [finishing / this data input] is read with a data reader, and various kinds of managements are made.

[0003] By the way, in the former, although it ***** to a punch card, it was carrying out using the instrument (card puncher) as shown in drawing 8. The conventional card puncher who shows this drawing 8 consists of a body 101 holding a punch card C, and ***** 102. the hole 106, 106 of a large number penetrated up and down ranging over vertical each plate 103, 104 while a body 101 forms the clearance 105 which sets a punch card C between the superior lamella 103 which consists of steel materials, respectively, and an inferior lamella 104 .. is formed. In addition, corresponding to the ***** surface part of a punch card C, as for the hole 106 of a body 101, a total of width 8 train and 48 vertical 6 trains is formed. Moreover, ***** 102 forms the insertion section 108 of a minor diameter in an upper part side at the assault section [of a major diameter] 107, and lower part side. In addition, the outer diameter of this insertion section 108 is the bore of the hole 106 by the side of a body 101 with the diameter of said mostly, in order to ***** finely to a punch card C.

[0004] The conventional card puncher who shows drawing 8 is used as follows. First, the ***** predetermined position (there are 10-20 places) corresponding to the various data which should be registered is checked in a conversion chart, and marking of those ***** predetermined positions is carried out to the punch card C, respectively. And if the insertion section 108 of ***** 102 is made to face the decided hole 106 and this ***** 102 is driven with a hammer from the upper part after inserting the intact punch card C into a clearance 105 from the near side of a body 101 and setting to a predetermined location, it can ***** in the predetermined location of a punch card C. Predetermined data can be similarly inputted into a punch card C one by one by doing a ***** activity to each ***** predetermined position of a punch card C, respectively.

[0005]

[Problem(s) to be Solved by the Invention] By the way, by the conventional card puncher who shows drawing 8, although structure was comparatively easy, there were the following problems on the occasion of use.

[0006] (1) Since it needed to have ***** 102 by one hand, the hammer needed to be grasped by the hand of another side and this ***** 102 needed to be driven with the hammer at the time of *****, there was risk of the ***** activity becoming troublesome, and a hand going wrong, and a hammer striking a hand.

[0007] (2) Where a punch card C is set to a body 101, great time amount was required for that (***** processing is carried out) which marking which shows a ***** predetermined position disappears, must take a punch card C in and out of a body 101 repeatedly making ***** much locations for the check of a ***** predetermined position, and inputs all data into one punch card C.

[0008] (3) Since the insertion section 108 of ***** and the hole 106 of a body 101 were the diameters of said mostly, ***** 102 (insertion section 108) driven in in this hole 106 could not be extracted easily, but the ***** draw activity had required most troublesome and time amount.

[0009] (4) Since marking was hard to look above in the state of the set of a punch card C, there was a possibility of ***** (ing) in the next location by mistake.

[0010] The invention in this application aims at offering the card puncher who enabled it to do a ***** activity moreover simply and correctly for a short time in view of the conventional card puncher's above-mentioned trouble.

[0011]

[Means for Solving the Problem] The invention in this application has the next configuration as above-mentioned The means for solving a technical problem.

[0012] Invention of invention this application claim 1 of this application claim 1 is targeted at the card puncher for making ***** the various data input locations of a punch card.

[0013] This card puncher has the maintenance base holding a punch card, and the ***** device in which it ***** to the punch card with which this maintenance base was equipped.

[0014] The ***** device has ***** which can go up and down, the die which receives this ***** , and the lever which operates ***** . That is, by depressing a lever, this ***** device can drop ***** and can form a punching hole now in a punch card between the tip of this ***** , and a die. In addition, a lever is good to make it energize up by the spring.

[0015] The maintenance base is guided free [migration] in a horizontal plane to a ***** device with guide equipment. As guide equipment, it has the horizontal guide which guides a maintenance base to a longitudinal direction in a horizontal plane, and the vertical guide guided to a lengthwise direction, and all the range of the ***** predetermined position of a punch card can be covered to ***** of a ***** device, and it can move now in a maintenance base.

[0016] In addition, a maintenance base is good to position correctly each ***** predetermined position of the punch card made to hold on a maintenance base to ***** of a ***** device according to a positioning device (fitting of a ball and a crevice).

[0017] In the card puncher of this application claim 1, if a maintenance base is equipped with a punch card, this punch card is located between the ***** lower limit of a ***** device, and a die, and is held in the condition that the top face (***** predetermined position) of a punch card can be clearly seen from the outside.

[0018] When ***** (ing) to a punch card using the card puncher of this claim 1, it is good to carry out marking to the ***** predetermined position (two or more places) of a punch card first. And if a lever is depressed after setting this punch card to a maintenance base, moving this maintenance base and making the ***** predetermined position of a punch card correspond to ***** of a ***** device, ***** will lower-** and a hole will be formed in the ***** predetermined position concerned. In this case, since a ***** predetermined position (marking) can be clearly seen, the alignment of this ***** predetermined position is easy. Then, a lever is returned up, a maintenance base is moved and a hole is similarly made in the next ***** predetermined position (a hole is similarly made in all marking parts one by one).

[0019] Thus, by the card puncher of this application claim 1, by moving this maintenance base in a horizontal plane, where a punch card is set to a maintenance base, the ***** location of a punch card can be adjusted and ***** can be made a punch card only by depressing a lever, where this ***** location is further doubled with a predetermined location.

[0020] Invention of invention this application claim 2 of this application claim 2 is equipped with the ***** position indicator which has the lighting display which was made to correspond to the various data input locations (***** predetermined position) of a punch card, and has arranged the display

lamp, respectively, the input section which makes a predetermined display lamp turn on, and the cursor which moves with a maintenance base in the card puncher of claim 1.

[0021] The pilot light of a lighting display is the total and the same number of a ***** predetermined position of a punch card, and is installed in this each ***** predetermined position and this array.

[0022] The input section can make the predetermined display lamp of a lighting display turn on by operating an input key.

[0023] And the location which should ***** a punch card beforehand by the card puncher of this claim 2 if alignment is carried out to the pilot light which was made to turn on the pilot light corresponding to the location which should operate the input section and should ***** , moved the maintenance base which set the punch card, and has turned on cursor is equivalent to the ***** location of a ***** device.

[0024] It becomes unnecessary therefore, to perform marking which shows a ***** location to a punch card by the card puncher of this claim 2.

[0025] In invention of invention this application claim 3 of this application claim 3, the ***** device is guided free [migration] in a horizontal plane to a maintenance base with guide equipment. That is, although migration of a maintenance base was enabled to the ***** device by the card puncher of above-mentioned claim 1, migration of a ***** device is conversely enabled in this claim 2. In addition, the configuration of others of the card puncher of this claim 2 is the same as that of claim 1.

[0026] And by the card puncher of this application claim 2, where a punch card is set to a maintenance base, ***** of this ***** device can be doubled with the predetermined ***** predetermined position of a punch card by moving a ***** device in a horizontal plane.

[0027] Invention of invention this application claim 4 of this application claim 4 is equipped with the ***** position indicator which has the lighting display which was made to correspond to the various data input locations of a punch card, and has arranged the display lamp, respectively, the input section which makes a predetermined display lamp turn on, and the cursor which moves with a ***** device in the card puncher of above-mentioned claim 3. In the ***** position indicator in this claim 4, the place which attached cursor in the ***** device side differs from the thing of above-mentioned claim 2 on the relation which a ***** device moves in a horizontal plane to a maintenance base.

[0028] And by the card puncher of this claim 4, it has become as [correspond / to the predetermined data input location of the punch card with which the ***** location by the ***** device was held on the maintenance base by carrying out alignment to the display lamp which operated the ***** device and has turned on cursor].

[0029]

[Embodiment of the Invention] If the operation gestalt of this application is explained with reference to drawing 1 - drawing 7 , the card puncher of this 2nd operation gestalt is shown in the 1st operation gestalt of this application, drawing 6 - drawing 7 at drawing 1 - drawing 5 . The card puncher of each of this operation gestalt is for making ***** for [various] data the punch card used for management of track scale.

[0030] It is **** * this morning to two or more ***** predetermined positions which there is a ***** predetermined position of a total of 48 places which consists of for example, width 8 train and vertical 6 train in the punch card C used for this card puncher, and correspond based on various data. In addition, the ***** predetermined position of a punch card C is the data input location and synonym in a claim.

[0031] The card puncher of the 1st operation gestalt shown in drawing 1 - drawing 5 has a pedestal 1, the maintenance base 2 holding a punch card C, the ***** device 3 for ***** (ing) to a punch card C, the guide equipment 4 that guide the maintenance base 2 free [migration] in a horizontal plane, the positioning device 6 which carry out station keeping of the maintenance base 2 in a predetermined ***** location, and the ***** position indicator 7 which direct the location which ***** to a punch card C, and is constituted. In addition, in the following explanation, the case where this card puncher is regarded as a longitudinal direction (the direction of arrow-head P-Q) or a cross direction (the direction of arrow-head R-S) from an actuation side is said. Moreover, a before side (arrow-head R side) is called

near side, and the backside (arrow-head S side) may be called back side.

[0032] The pedestal 1 has formed the installation base 12 which lays guide equipment 4 and the ***** position indicator 7 on the rectangular base plate 11, and the mount 14 which attaches the ***** device 3. The installation base 12 is formed in the slightly elevated frame configuration in the near side (arrow-head R side) of a base plate 11, and the another side mount 14 is considerably formed in the back side (arrow-head S side) of a base plate 11 in the shape of [of large height] a wall.

[0033] The maintenance base 2 has attached the KO molding flask 22 in the back side of a little double-width base plate 21 from the width of face of a punch card C. The open section 23 of a large area is considerably formed in the interior of the KO molding flask 22. Moreover, the guide slot 24 which guides each side edge of a punch card C is formed in each inside of right-and-left both the side parts in the KO molding flask 22. Furthermore, the pieces 25 and 25 of a guide which position the back end edge of a punch card C are formed in the right-and-left both sides of the near-side end face of a base plate 21. The upper limit of each of these pieces 25 and 25 of a guide is projected more slightly than the top face of a base plate 21. And making the edges on both sides of a punch card C guide to the guide slots 24 and 24 on on either side, in order to make this maintenance base 2 equip with a punch card C, the tip of this punch card C is inserted until it contacts the back end section of the KO molding flask 22. In this condition, the back end edge of a punch card C is guided by the pieces 25 and 25 of a guide, and this punch card C is positioned by order and right and left according to migration disabling. Moreover, the knobs 27 and 27 of two right and left are attached in the near-side end face of a base plate 21.

[0034] The guide equipment 4 which guides the maintenance base 2 has the vertical guide 41 which guides this maintenance base 2 to a cross direction (the direction of arrow-head R-S), and the horizontal guide 45 which guides this maintenance base 2 to a longitudinal direction (the direction of arrow-head P-Q). The vertical guide 41 carries out fitting of the sliders 43 and 43 to the rails 42 and 42 of a Uichi Hidari pair which are suitable on the installation base 12 at a cross direction, respectively. Each sliders 43 and 43 are connected by the horizontal member 44. Moreover, the horizontal guide 45 carries out fitting of the slider 47 to the rail 46 which is suitable on a horizontal member 44 at a longitudinal direction. The slider 47 by the side of this horizontal guide 45 is being fixed to base plate 21 inferior surface of tongue of the maintenance base 2. This guide equipment 4 can be freely moved now into a horizontal plane in the vertical guide 41 and the horizontal guide 45.

[0035] The ***** device 3 has ***** 31, the die 36 which receives ***** 31 from a lower part, and the lever 38 which depresses ***** 31.

[0036] The mount 14 for attaching this ***** device 3 has the lower base 15 furnished with a die 36, and the up base 16 holding ***** 31. Between the lower base 15 and the up base 16, the space section 17 which can insert the maintenance base 2 is formed. And a die 36 is attached in the lower base 15, and ***** 31 is attached in the up base 16 through the guide cylinder 32. In addition, ***** 31 and a die 36 are arranged in the location corresponding to the upper and lower sides.

[0037] The top face of a die 36 is set as contact or the height of extent estranged very slightly on the inferior surface of tongue of the punch card C set to the maintenance base 2. The lower part side of a die 36 is formed in tubed as shown in drawing 3 R> 3 and drawing 4. moreover, the internal dead air space 37 of a die 36 is wide opened caudad through the hole formed in the base plate 11 of a pedestal 1, and was pierced from the punch card C -- extracting -- ** D (drawing 4) -- a base plate 11 -- it falls caudad. In addition, the receptor 9 which extracts and holds ** D is formed in the inferior surface of tongue of a base plate 11.

[0038] ***** 31 can move up and down freely to the guide cylinder 32, and the guide cylinder 32 is attached free [vertical movement] to the up base 16. The guide cylinder 32 is energized up by the spring (bottom spring) 33 to the up base 16, and ***** 31 is energized up by the spring (top spring) 34 to the guide cylinder 32. In addition, the top spring 34 makes the energization force larger than the bottom spring 33.

[0039] The lever 38 is pivoting the end face section in the upper limit section of a mount 14 with the shaft 19. Moreover, the piece 39 of press which presses upper limit is attached in the end face section approach location of a lever 38 in ***** 31.

[0040] And as this ***** device 3 is shown in drawing 1 - drawing 3 at the time of the non-push down of a lever 38, ***** 31 and the guide cylinder 32 are upper-**(ed) by vertical each springs 33 and 34. In addition, in the state of the non-push down of a lever 38, the top spring 34 gets down from elongation OFF, and the guide cylinder 32 is lifted up by the bottom spring 33. Therefore, in this condition, a clearance can be made between the lower limit of ***** 31, and the top face of a die 36, and the punch card C set to the maintenance base 2 can carry out now horizontal migration of this clearance. Moreover, although ***** 31 is made to lower-** by the piece 39 of press as shown in drawing 4 when a lever 38 is depressed, a hole is made in the punch card C which was made to lower-** the guide cylinder 32 by the top spring 34 to lower ** and coincidence of the ***** 31, pressed down the top face of a punch card C by this guide cylinder 32, and was set to the maintenance base 2 after that on the inferior surface of tongue of ***** 31.

[0041] the positioning device 6 -- a top face -- many small crevices 62 and 62 -- it has the plate 61 in which .. was formed, and the ball 65 inserted into this small crevice 62. The plate 61 is attached on the installation base 12 of a pedestal 1. Each smallness crevice 62 formed in this plate 61 is arranged so that it may correspond to each ***** predetermined position (a total of 48 places of width 8 train and vertical 6 train) of a punch card C correctly. Moreover, each of this smallness crevice 62 is following order and right and left by the small concave (shallower than the small crevice 62). As shown in drawing 3, a ball 65 is held at the electrode holder 64 attached in the inferior surface of tongue of the maintenance base 2, and is caudad energized by the spring 66.

[0042] And by moving the maintenance base 2, a ball 65 moves to each smallness crevice 62, and this positioning device 6 comes to move. Moreover, when a ball 65 is made to insert into the small crevice 62 of the lower right corner on a plate 61, this positioning device 6 is set up so that the upper left corner in each ***** predetermined position of the punch card C which the maintenance base 2 set may be located in ***** of the ***** device 3. In addition, each smallness crevice 62 and the small concave which is following order and right and left in between 62 are for guiding the migration direction of a ball 65, and has the function for which the maintenance base 2 is moved in the direction of a straight line on either side before and after meeting each smallness concave.

[0043] The ***** position indicator 7 has the body 70 of an indicator attached on the installation base 12 of a pedestal 1, and the cursor 77 which moves with the maintenance base 2.

[0044] it is shown in the top face of the body 70 of an indicator at drawing 5 -- as -- the display lamps 76 and 76 of the ***** predetermined position of a punch card C, and the same number (a total of 48 pieces) -- the lighting display 75 which has .., the input section 71 which makes the predetermined display lamp 76 turn on, and the data display section 73 which displays the inputted data are formed.

[0045] The LED lamp is used for each display lamp 76 of the lighting display 75. Each of this pilot light 76 is made to correspond to each ***** predetermined position of a punch card C, and is made to arrange in all directions, respectively.

[0046] the input keys 72 and 72 of various kinds [section / 71 / input], such as a car number and a code ten key, -- it has .. And actuation of this each input key 72 displays the display corresponding to the input key on the data display section 73. And if the definite key 72 of the input section 71 is pressed, it is programmed so that each display lamp 76 corresponding to the contents displayed on the data display section 73 lights up. In addition, the location of this turned-on pilot light 76 is equivalent to the location which should ***** to a punch card C.

[0047] Cursor 77 is attached in this maintenance base 2 with this 1st operation gestalt on the relation which the maintenance base 2 moves. And when the ***** predetermined position of a punch card C, for example, an upper left corner, set to the maintenance base 2 corresponds to ***** of the ***** device 3, this cursor 77 is set up so that the cursor point (cursor directions section) 78 may be located on the display lamp 76 of an upper left corner. If it does in this way, and the maintenance base 2 will be moved and the cursor point 78 will be united with the lighting pilot light 76, the predetermined ***** predetermined position in the punch card C set to the maintenance base 2 comes to correspond to ***** of the ***** device 3 correctly.

[0048] The card puncher of the 1st operation gestalt shown in drawing 1 - drawing 5 is used as follows.

First, the power source of the body 70 of an indicator is turned ON, and the non-inputted punch card C is set to the maintenance base 2. In addition, the back is available for the set of a punch card C. Next, the various data which should be inputted into a punch card C are inputted in the input section 71 (input key 72), and after checking the contents displayed on the data display section 73, if the definite key 72 is pressed, the display lamp 76 (plurality) of a predetermined location will light up. And the maintenance base 2 is moved with a knob 27, and alignment of the cursor point 78 is carried out to the lighting display lamp 76. At this time, the ball 65 of the positioning device 6 is inserting into the predetermined small crevice 62, and the maintenance base 2 is positioned in the predetermined location. Next, if the lever 38 of the ***** device 3 is depressed, ***** 31 lower-** and ***** in the predetermined location of a punch card C with this ***** 31 and a die 36. In addition, the ***** omission material D falls the internal dead air space 37 of a die 36, and is held in the receptor 9 of base plate 11 inferior surface of tongue. Then, if the push down of a lever 38 is canceled, according to the energization force of the vertical springs 33 and 34, ***** 31 will upper-** and will become movable [the maintenance base 2]. And similarly, after moving the cursor point 78 to the location of the following lighting pilot light 76, ***** can be performed in a predetermined location one by one to a punch card C by depressing and operating a lever 38.

[0049] Thus, by the card puncher of this 1st operation gestalt, after setting a punch card C to the maintenance base 2, moving the maintenance base 2 and doubling the cursor point 78 with the lighting pilot light 76, a hole can be made in the predetermined ***** predetermined position of a punch card C by actuation of depressing a lever 38, and, moreover, that ***** activity can carry out simply and correctly in a short time. Moreover, since a lighting indication of the location which should ***** is given with a display lamp 76 in what attached the ***** position indicator 7 like this operation gestalt, the cursor point 78 is only united with this lighting display lamp 76, the alignment of the location which should ***** a punch card C can be carried out to ***** of the ***** device 3, and the time and effort which attaches marking which shows a ***** location to a punch card C can be omitted.

[0050] In addition, in invention of this application claim 1, although the ***** position indicator 7 is omissible, since the inside of the KO molding flask 22 of the maintenance base 2 serves as the open section 23, the ***** predetermined position of the punch card C set to the maintenance base 2 can be clearly seen from an activity location, and the activity to which alignment of the location which should ***** this punch card C is carried out to ***** of the ***** device 3 can be done easily even in such a case.

[0051] Next, the card puncher of the 2nd operation gestalt shown in drawing 6 - drawing 7 is explained. The ***** device 3 side can move [the maintenance base 2 which sets a punch card C] the card puncher of this 2nd operation gestalt freely in a horizontal plane by immobilization. That is, the ***** device 3 (***** 31, a die 36, lever 38 grade) is attached in mount 14A made movable in the horizontal plane with guide equipment 5 to the pedestal 1.

[0052] Guide equipment 5 has the horizontal guide 55 and the vertical guide 51. The horizontal guide 55 has the slider 57 slid to the rail 56 (1) and this rail 56 of the shape of a rod constructed over the installation base 12 of a pedestal 1 towards the longitudinal direction. On the other hand, the vertical guide 51 has the slider 53 (it is united in mount 14A) slid to the rail 52 (2) and this rail 52 of the shape of a rod supported by the slider 57 of the horizontal guide 55 towards the direction of the back (immobilization). And mount 14A can move now to order and right and left with the above-mentioned vertical guide 51 and the horizontal guide 55.

[0053] The maintenance base 2 is being fixed on the installation base 12. In addition, with the thing of the 1st operation gestalt, this maintenance base 2 is this structure mostly, and can hold a punch card C now in an orientation.

[0054] The positioning device 6 attached many plates 61 with the small crevice 62 on the base plate 11 of a pedestal 1, and has attached another side and the ball 65 held with the electrode holder 64 at the mount 14A side.

[0055] The cursor 77 of the ***** position indicator 7 is attached in mount 14A of a movable side, and moves with this mount 14A. In addition, the body 70 of an indicator is the same as that of the thing of

the 1st operation gestalt.

[0056] And by the card puncher of this 2nd operation gestalt, it is used as follows. In addition, after the non-inputted punch card C makes a display lamp 76 turn on, it may be made to hold on the maintenance base 2, even if it makes it hold on the maintenance base 2 previously. First, it can ***** in the predetermined location of a punch card C by inputting various kinds of data which should ***** to a punch card C in the input section 71 of the ***** position indicator 7, making the -> predetermined pilot light 76 turn on, grasping the -> lever 38, moving mount 14A, carrying out alignment of the cursor point 78 to the lighting pilot light 76, and depressing the -> lever 38. One by one, similarly, alignment of the cursor point 78 is carried out to all the lighting display lamps 76, and a ***** activity is done. In addition, the card puncher of this 2nd operation gestalt also has the same function as the thing of the 1st operation gestalt.

[0057]

[Effect of the Invention] Although this punch card C is located between ***** 31 lower limit of the ***** device 3, and a die 36 by this application claim 1 and the card puncher of each invention of three if the maintenance base 2 is equipped with a punch card C Since the top face (***** predetermined position) of a punch card C can be clearly seen from the outside in this condition, it is effective in alignment actuation (alignment actuation by migration of the maintenance base 2 or the ***** device 3) with the location which should ***** a punch card C, and ***** by the ***** device 3 becoming easy. Moreover, since what is necessary is just to depress a lever 38 on the occasion of ***** , it is effective in ***** actuation becoming easy.

[0058] Moreover, by each invention of this application claims 2 and 4, the display lamp 76 in the ***** position indicator 7 which should ***** can be switched on, and alignment of ***** and ** by the location which should ***** a punch card C, and the ***** device 3 can be correctly carried out by carrying out alignment of the cursor 77 to this lighting display lamp 76. Therefore, by the card puncher of these claims 2 and 4, it is effective in the time and effort which performs marking which shows a ***** location to a punch card C becoming unnecessary in addition to the effectiveness of claim 1 or each card puncher of 3.

[Translation done.]

* NOTICES *

JPO and NCIPi are not responsible for any damages caused by the use of this translation.

1. This document has been translated by computer. So the translation may not reflect the original precisely.
2. **** shows the word which can not be translated.
3. In the drawings, any words are not translated.

CLAIMS

[Claim(s)]

[Claim 1] The maintenance base which is a card puncher for making ***** the various data input locations of a punch card (C), and holds said punch card (C) (2), It has the ***** device (3) in which it ***** to the punch card (C) with which this maintenance base (2) was equipped. Said ***** device (3) While having the die (36) which receives ***** (31) which can go up and down, and this ***** (31), and the lever (38) which operates said ***** (31), said maintenance base (2) The card puncher characterized by what was guided free [migration] in the horizontal plane to said ***** device (3) with guide equipment (4).

[Claim 2] The lighting display which was made to correspond to the various data input locations of a punch card (C), and has arranged the display lamp (76) in claim 1, respectively (75), It has the ***** position indicator (7) which has the input section (71) which makes a predetermined display lamp (76) turn on, and the cursor (77) which moves with a maintenance base (2). The card puncher to whom the predetermined data input location of the punch card (C) held on the maintenance base (2) is characterized by what was corresponded to the ***** location by the ***** device (3) by carrying out alignment of said cursor (77) to the pilot light (76) made to turn on.

[Claim 3] The maintenance base which is a card puncher for making ***** the various data input locations of a punch card (C), and holds said punch card (C) (2), It has the ***** device (3) in which it ***** to the punch card (C) with which this maintenance base (2) was equipped. Said ***** device (3) While having the lever (38) which operates ***** (31) which can go up and down, and this ***** (31), and the die (36) which receives this ***** (31), said ***** device (3) The card puncher characterized by what was guided free [migration] in the horizontal plane to said maintenance base (2) with guide equipment (5).

[Claim 4] The lighting display which was made to correspond to the various data input locations of a punch card (C), and has arranged the display lamp (76) in claim 3, respectively (75), It has the ***** position indicator (7) which has the input section (71) which makes a predetermined display lamp (76) turn on, and the cursor (77) which moves with a ***** device (3). The card puncher to whom the ***** location by the ***** device (3) is characterized by what was corresponded to the predetermined data input location of the punch card (C) held on the maintenance base (2) by carrying out alignment of said cursor (77) to the display lamp (76) made to turn on.

[Translation done.]

**This Page is Inserted by IFW Indexing and Scanning
Operations and is not part of the Official Record**

BEST AVAILABLE IMAGES

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images include but are not limited to the items checked:

- ☐ **BLACK BORDERS**
- ☐ **IMAGE CUT OFF AT TOP, BOTTOM OR SIDES**
- ☐ **FADED TEXT OR DRAWING**
- ☐ **BLURRED OR ILLEGIBLE TEXT OR DRAWING**
- ☐ **SKEWED/SLANTED IMAGES**
- ☐ **COLOR OR BLACK AND WHITE PHOTOGRAPHS**
- ☐ **GRAY SCALE DOCUMENTS**
- ☐ **LINES OR MARKS ON ORIGINAL DOCUMENT**
- ☐ **REFERENCE(S) OR EXHIBIT(S) SUBMITTED ARE POOR QUALITY**
- ☐ **OTHER:** _____

IMAGES ARE BEST AVAILABLE COPY.

As rescanning these documents will not correct the image problems checked, please do not report these problems to the IFW Image Problem Mailbox.